IN THE SPECIFICATION:

Please amend the paragraph beginning on Page 1, line 5 as follows:

A1

The present application is related to U.S. application Serial No. 09/653,023, titled A Method for Recovering 3D Structure and Camera Motion from Points, Lines and/or Directly from the Image Intensities, filed on 9/1/00 by the same inventor as the present application, which related application is incorporated herein by reference.

Please delete the paragraph beginning on Page 3, line 1.

~~Most SFM algorithms that are currently known reconstruct the scene from previously computed feature correspondences, usually tracked points. Other algorithms are direct methods that reconstruct from the images intensities without a separate stage of correspondence computation. Previous direct methods were limited to a small number of images, required strong assumptions about the scene, usually planarity or employed iterative optimization and required a starting estimate.~~

Please amend the paragraph beginning of Page 8, line 1 as follows:

A2

The method of the present invention assumes that the 3D structure is to be recovered from an image sequence consists of N_I images of fixed size, each with N_p pixels. Let $\mathrm{p}_n \equiv (x_n, y_n)^T$ give the image coordinates of the n-th pixel position. Let I^i denote the i-th image, with i=0.1…, $N_I - 1$, and let $I_n^i = I^i(p_n)$ denote the image intensity at the n-th pixel position in I^i. We take I^0 as the reference image. Let P_n denote the 3D point imaged at p_n in the reference image, with $\mathrm{P}_n \equiv (X_n, Y_n, Z_n)^T$ in the coordinate system of I^0. Let d_n^i denote the shift in image position from I^0 to I^i of the

3D feature point P_n. The motion of the camera is described as its translation and rotation. Let $T^i \equiv (T_x^i, T_y^i, T_z^i)^T$ represent the camera translation between the reference image and image *i*, and let R^i denote the camera rotation. In accordance with the method of the present invention we parameterize a small rotation by the rotational velocity $\omega^i \equiv (\omega_x^i, \omega_y^i, \omega_z)^T$. Let a 3D point P transform as $P' = R(P - T)$. Let $p_n^i \equiv (x_n^i, y_n^i)^T \equiv p_n + d_n^i$ be the shifted position in I^i of $p_n \in I^0$ resulting from the motion ~~T^i, R_i~~ $\underline{T^i, R^i}$.

A2

<u>Please amend the paragraph beginning of Page 9, line 3 as follows:</u>

Let $\nabla I_n = \nabla I(p_n)$ represent the (smoothed) gradient of the image intensities $I^0(p_n)$ and define $(I_{xn}, I_{yn})^T \equiv \nabla I_n$. Similarly, let ΔI_n^i be the change in (smoothed) intensity with respect o the reference image. With no smoothing $\Delta I_n^i = I_n^i - I_n^0$. Let Δ be a $(N_I - 1) \times N_p$ matrix with entries ΔI_n^i.

A3